Title: SEMICONDUCTOR DEVICE USING AN INTERCONNECT

Assignee: Intel Corporation

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# PRELIMINARY REMARKS

No rejections were asserted with respect to claims 2 and 11. Applicant has amended claims 2 and 11 by incorporating all the limitations of independent claim 1 as previously presented. The entire scope of these claims was previously examined, and no new matter has been added. Applicant respectfully requests these claims be passed to allowance.

### **REMARKS**

This responds to the Office Action mailed on January 12, 2005.

Claims 1, 2, 5, and 11 are amended; as a result, claims 1-17 are now pending in this application.

The amendments to the specification and claims are fully supported by the specification as originally filed, and no new matter has been added. The amendments are made to correct typographical errors and also to update the priority application information.

#### Claim Objection

Claim 1 was objected to due to informalities. It is believed that the amendment made herein to claim 1 obviates said objection.

### Information Disclosure Statement

Applicant submitted an Information Disclosure Statement and a 1449 Form on August 5, 2003. Applicant respectfully requests that an initialed copy of the 1449 Form be returned to Applicant's Representatives to indicate that the cited references have been considered by the Examiner.

#### §102 Rejection of the Claims

Claims 1, 3 and 7 were rejected under 35 USC § 102(e) as being anticipated by Ng (U.S. 5,994,217). Applicant respectfully traverses this rejection and requests the Office to consider the following.

#### AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

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"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." (*Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987), M.P.E.P. §2131, 8<sup>th</sup> Ed., Rev. 1).

Ng teaches metal layer has breached through layers 24 and 28. Accordingly there is no process taught of stopping on a diffusion barrier layer. Because Ng does not anticipate claim 1, withdrawal of the rejections is respectfully requested.

## §103 Rejection of the Claims

Claims 4-6, 8-10 and 12-17 were rejected under 35 USC § 103(a) as being unpatentable over Ng. Applicant respectfully traverses the rejection and requests the Office to consider the following.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (M.P.E.P. § 2143 8<sup>th</sup> Ed, Rev.1).

The Office Action admits that "Ng lacks anticipation ... in not teaching that an organic ILD may be used." (Office Action at page 3). Since all the elements the claims are admitted not to be found in the cited reference, and since the rejection is based upon a single-reference action, Applicant assumes that the Office is taking official notice of the missing elements from an undisclosed source. Applicant respectfully objects to the taking of official notice, and pursuant to M.P.E.P. § 2144.03, Applicant traverses the assertion of official notice and requests that the Office cite a reference that teaches the missing element. If the Office cannot cite a reference that teaches the missing element, applicant respectfully requests that the Office provide an affidavit

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that describes how the missing element is present in the prior art. If the Office cannot cite a reference or provide an affidavit, Applicant requests withdrawal of the rejections.

No rejections were asserted with respect to claims 2 and 11. These claims have been amended to include all the limitations of independent claim 1, and for claim 11 also claim 8. No new matter is added by these amendments, and the entire scope of amended claims 2 and 11 were previously examined. Applicant earnestly requests these claims be passed to allowance.

#### AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

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## Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney, John Greaves at (801) 278-9171 or the below signed attorney to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

JIHPERNG LEU ET AL.

By their Representatives,

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Date March 14, 2005

Ann M. McCrackin

Reg. No. 42,858

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this day of 2005.

Name

Signature